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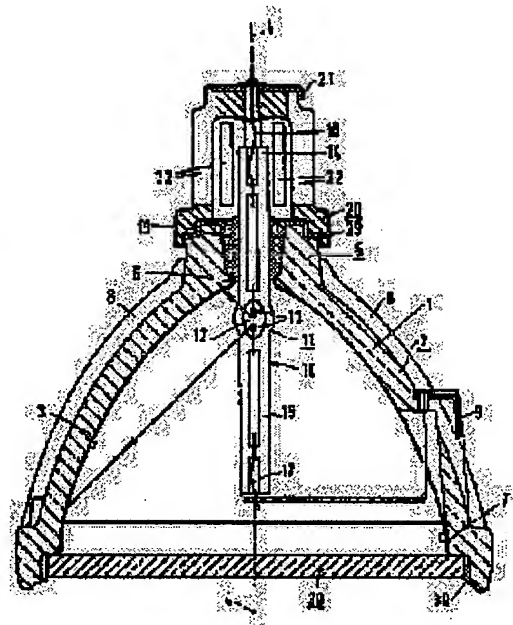
EP

## (54) UNIT OF BULB AND REFLECTOR

(57)Abstract:

PURPOSE: To provide a unit of bulb and reflector of a simple structure having a relatively large surface of a reflection when a form and dimensions of a reflector are given.

CONSTITUTION: A unit of bulb and reflector has a mold reflector 1 with a hollow neck 5. A bulb 10 which has a lamp container 11 equipped with a first and a second opposing ends 14 and 15 is fixed at the first end inside the neck 5. The neck 5 has a narrow part 6 adjacent to a reflection surface 3 of the reflector 1. From this narrow part the inside of the neck 5 is expanded conically toward a base 20 supported by the neck 5.



## LEGAL STATUS

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**CLAIMS**


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## [Claim(s)]

[Claim 1] The mold reflector equipped with the hollow necklike part (5) which are a reflective part (2) and this reflective part with the concave reflector (3) which has an optical axis (4), and one, and has surrounded the above-mentioned optical axis (1), It is the electric bulb (10) with which the light transmission lamp container (11) with the cavity (12) where a vacuum lock is carried out and the electric element (13) is arranged is prepared. The 1st which has the closure section in this lamp container, and the edge (14 15) which has countered mutual [ 2nd ] are prepared. The conductor (16 17) is drawn from said lamp container (11) outside. each current connected to said electric element (13) through these closure section -- And locate said 1st edge (14) in said necklike part (5), and, on the other hand, said cavity (12) is located in the interior of said reflective part (2). And said electric bulb fixed to said reflector (1) in the condition that said electric element (13) is on said optical axis (4) (10), In the unit of the electric bulb which has the mouthpiece (20) currently fixed to said necklike part (5) of said reflector (1) with electric contact (21) to which the conductor (16) was connected, and a reflector said current -- The unit of the electric bulb characterized by having spread in the shape of a cone toward the direction of said mouthpiece (20) from the above-mentioned necklike part in this inside section while said necklike part (5) has the narrow part (6) which shifts to said reflector (3) in the inside section, and a reflector.

[Claim 2] The unit of the electric bulb according to claim 1 characterized by closing said reflector (1) with the transparence plate (30), and a reflector.

[Claim 3] The electric bulb according to claim 2 characterized by said reflective part (2) having the trailer (7) of the shape of a \*\*\*\* cylinder which adjoins said transparence plate (30), and the unit of a reflector.

[Claim 4] The electric bulb according to claim 2 or 3 characterized by having the concave convex which has said reflector (1) outside, and the unit of a reflector.

[Claim 5] The electric bulb according to claim 1 or 2 characterized by preparing the ventilating hole (22) in said mouthpiece (20), and the unit of a reflector.

[Claim 6] said current drawn from said 2nd edge -- the unit of the current according to claim 1 or 2 characterized by for a conductor (17) falling out outside through said reflective part (2), and connecting it to a contact member (9) there, and a reflector.

[Claim 7] An electric bulb given in claim 1 characterized by a ring (58) being in the perimeter of said 1st edge [ / near said narrow part (46) in said necklike part (45) ] (54) thru/or any 1 term of 3, and the unit of a reflector.

[Claim 8] the perimeter of said 1st edge [ ring / (58) / near said narrow part (46) in said necklike part (45) ] (54) -- it is -- said current -- an electric bulb given in claim 1 characterized by for a conductor (57) falling out from said 2nd edge outside through a reflective part (42), and connecting it to a contact member (49) there thru/or any 1 term of 3, and the unit of a reflector.

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**DETAILED DESCRIPTION****[Detailed Description of the Invention]**

**[0001]**

**[Industrial Application]** The mold reflector equipped with the hollow necklike part which this inventions are a reflective part and this reflective part with the concave reflector which has an optical axis, and one, and has surrounded the above-mentioned optical axis, It is the electric bulb with which the light transmission lamp container with the cavity (cavity) by which a vacuum lock is carried out and the electric element is arranged is prepared. The 1st which has the closure section in this lamp container, and the edge which has countered mutual [ 2nd ] are prepared. The conductor is drawn from said lamp container outside. each current connected to said electric element through these closure section -- And the electric bulb fixed to said reflector in the condition that the 1st edge is located in said necklike part, and said cavity is in the interior of a reflective part on the other hand, and said electric element is on said optical axis, said current -- it is related with the unit of the electric bulb which has the mouthpiece currently fixed to the necklike part of said reflector with electric contact to which the conductor was connected, and a reflector.

**[0002]**

**[Description of the Prior Art]** The unit of the above electric bulbs and a reflector is known from the United States patent application No. 4423348.

**[0003]** A such type unit can be used also not only in the thing aiming at projection like a film or slide projection but in projection TV (projection TV) equipment. When the light generated by said lamp should be used efficiently, this lamp needs to locate an own electric element on the optical axis of a reflective part. Change of the location of the above-mentioned component in a lamp container makes the large necklike part for giving a motion of the longitudinal direction of the above-mentioned lamp need. However, such a large necklike part will decrease the magnitude of the reflector of the reflector of a given configuration and a dimension.

**[0004]** The loss of further others of reflector area (reduction) is produced when it must have the form where clearing (clearing) of said reflector should be carried out. This clearing means that the above-mentioned reflector must be able to take out from the mold (mold) by which this reflector is fabricated. Within the open mold (open mould), this is possible, only when migration of the above-mentioned reflector is possible, and thereby in a last side face, the gap between mold and a reflector is obtained. The known reflector has spread in the direction of a reflective part for this purpose. To a motion of the longitudinal direction of said lamp, if a sufficient room is required in the free end of said necklike part, this necklike part needs to have large space too much also in the part which adjoins said reflective part according to this.

**[0005]** According to the European Patent application No. 92201469, the necklike part is divided into two longitudinal parts. These parts are combined at the time of the assembly of a reflector and a lamp. In this case, when a reflective part and this necklike part that is one become short, the breadth to the direction of the above-mentioned reflective part becomes small according to this. However, the number of components by which assembly should be carried out has inconvenient [ with one / which increases by this division ].

**[0006]**

**[Objects and Summary of the Invention]** It is in offering the unit of an electric bulb which the place made into the purpose of this invention is an easy configuration, and has a comparatively big reflector and which is explained at the beginning, and a reflector.

**[0007]** According to this invention, when this necklike part spreads in the shape of a cone toward the direction of a mouthpiece from the above-mentioned necklike part in the inside section, the above-mentioned purpose is realized while a necklike part has the narrow part (narrowed portion) which shifts to a reflector in the inside section.

**[0008]** For the configuration of the reflector especially in a necklike part, a reflector can be formed by the 1st mold, and

the cavity in the above-mentioned necklike part can be formed by the 1st mold and the 2nd mold which collaborates. In the closed mold (closed mould), these two parts coalesce in said narrow part. As a result, the size required in order that the above-mentioned narrow part may position an electric element on an optical axis by lateral migration will be chosen. As a result, opening of the reflector where the above-mentioned necklike part shifts to a reflective part is in the solid angle around the 1st edge of a lamp in general, and what light or effective light is not \*\*\*\*\* (ed) in this solid angle for refraction by the quality of the material of a lamp container.

[0009] The amount of necklike part makes it possible to fix a lamp container to a reflector by the periphery comrade using a coagulant, for example, cements like lamp cement. For this purpose, it is advantageous that the above-mentioned necklike part becomes the largest in the own free end. Moreover, it is advantageous that the above-mentioned necklike part has a narrow part near the reflective part. This configuration prevents the danger that non-solidified adhesives will flow out into a reflective part. Moreover, even if other components of the unit concerned cannot still be found, there is an advantageous point which can assemble an electric bulb with a reflector.

[0010] In a certain example, a ring is in the perimeter of said 1st edge [ / near the narrow part of a necklike part ]. This advantage flows comparatively easily, for example, I hear that it can use the adhesives which are jointing materials for corrugated fibreboard like lamp cement in the case of spreading, and it is in it. That is, this ring narrows this path so that the path to a reflective part may be taken up to the matter which flows easily.

[0011] It is advantageous to the safety of the unit concerned to close a reflector with a transparence plate. Thereby, an inflammable body can prevent contacting the hot part of the lamp concerned. Moreover, thereby, the danger of bringing about explosion of said lamp container can be decreased. Said transparence plate is fixable to said reflector using adhesives like for example, silicon adhesives. The above-mentioned transparence plate may be fixed in other examples by mechanical means which uses the ring with which the flange was attached to the perimeter of a reflector. Instead, a clamp ring or some clamps may be used.

[0012] In a suitable modification, said reflector has a \*\*\*\* cylinder-like trailer near said transparence plate. Supposing it wishes, in order to realize temperature low have [ no increment in capacity ] as a whole which causes the increment in a diameter of the unit concerned, it is possible to enlarge capacity inside this reflector as a result. Such an increment in a diameter does not have the cylindrical concave surface-like reflector which is curving parabolic or in the shape of an ellipse, and it will be produced when expanded to shaft orientations with extent of the same curve as the above.

[0013] In addition as other examples, it is still more possible to give a concave convex like for example, a field with a rib (ribbed surface) to the exterior of said reflector. Thereby, it is increased and surface area makes bigger heat transfer possible. In fact, not only a transparence plate but the adhesives for fixing the lamp concerned to a necklike part have restricted or barred the ventilation in a reflector.

[0014] Opening like the slot for producing the flow of air can be prepared into the mouth piece at said mouthpiece. In other examples, a ceramic like the shape of a cylindrical shape or the metal body fixed to the perimeter of said 1st edge is sufficient as this mouthpiece. the above -- a mouthpiece -- for example, in said necklike part, a projection jointing material for corrugated fibreboard is used, and it may be fixed.

[0015] Said electric element may be the electrode of the incandescent body in the inert gas which has a halogen, or the pair in ionicity gas. When to operate or light a discharge arc by the high voltage (reignition) is desired, it is advantageous that said current lead wire falls out from said 2nd edge outside through said reflective part, and is connected to a contact member there. In this case, probably, it is comparatively separated from the two above-mentioned contact members of each other of distance. Therefore, the danger of a flashover (flash over) among these members becomes very small.

[0016] For example, in the unit which is the lamp which has packing containing the lamp which has packing containing rare gas and metal halide or rare gas, mercury, and a halogen, and has 200 bar of \*\*\*\*, and very high \*\*\*\*\* beyond it and which has discharge lamps, such as a high-pressure discharge lamp, for example, it is advantageous to have a crevice for a means, for example, this purpose, for said reflector to hold a low battery / high-voltage converter outside. In this case, lead wire which transmits the high voltage can be shortened very much.

[0017]

[Example] In drawing 1, the unit of an electric bulb and a reflector has the mold reflector 1 equipped with the reflective part 2 with a concave surface like the reflector 3 which curved in the shape of [ with an optical axis 4 ] a paraboloid, and this and the hollow necklike part 5 surrounding the above-mentioned optical axis of one. However, in other examples, this reflector could curve for example, in the shape of an ellipse. In a drawing, the above-mentioned reflector is made with glass and has a metal layer, for example like an aluminum layer which acts as a mirror. However, as the substitute, the above-mentioned reflector may be made from a metal or synthetic resin. Moreover, the unit concerned has the electric bulb 10 with which the light transmission lamp container 11 made from quartz glass is formed. The vacuum

lock of this lamp container is carried out, and it has the cavity (cavity) 12 by which the electric element 13 which is the electrode of a pair is arranged in drawing. Furthermore, the above-mentioned lamp container has the 1st edge 14 and 2nd edge 15 with a closure part. these edges -- mutual -- countering -- \*\*\*\* -- on the other hand -- each current -- conductors 16 and 17 -- the inside of each closure part -- a passage -- said electric element 13 -- connecting -- having -- another side -- the exterior from the lamp container 11 -- escaping -- \*\*\*\* . The lamp currently illustrated is a high-pressure mercury discharge lamp which has 200 bar of \*\*\*\*, and a pressure beyond it at the time of actuation. Said lamp container contains the rare gas and the bromine like an argon in addition to mercury. Said electric bulb 10 which consumes \*\*\*\* 70 thru/or 150W power is in the condition of having located said 1st edge 14 inside said necklike part 5, and having located said cavity 12 inside said reflective part 2, and having located said electric element 13 on said optical axis 4, and is fixed to said reflector 1 with a jointing material for corrugated fibreboard 19 in drawing. said current -- the mouthpiece 20 currently made from the ceramic ingredient in drawing like a steatite for example, it has electric contact 21 to which a conductor 16 is connected is fixed to the necklike part 5 of said reflector 1 in drawing with a jointing material for corrugated fibreboard 29.

[0018] Said necklike part 5 has the narrow part 6 which shifts to the inside section in said reflector 3. As for this necklike part, the inside section has spread in the shape of a cone in the direction of said mouthpiece 20 from the above-mentioned narrow part.

[0019] The lamp currently illustrated emits light at the include angle of \*\*45 degrees to the perpendicular of a discharge way. The light which all \*\*\*\* generated by said narrow part 6 is curving in the shape of [ of a reflector 3 ] a paraboloid, and is turned to the part by which the radius-of-circle part which shifts to said necklike part is not deformed. The 1st and the 2nd part of mold (mold) grow into 1 \*\* in the field of said narrow part at the time of mold shaping of said reflector.

[0020] The reflector 1 currently illustrated is closed by the transparence plate 30. This transparence plate is being fixed using the jointing material for corrugated fibreboard 39 in drawing, although it may be equipped by other means like a metal ring in other examples.

[0021] Said reflective part 2 has the trailer 7 of the shape of a \*\*\*\* cylinder which adjoins said transparence plate 30. So, it is increased by the capacity of the above-mentioned reflective part, without expanding the diameter of a unit sharply.

[0022] It has a concave convex in the outside of said reflector 1 \*\*. Some waves have extended in shaft orientations.

[0023] The ventilating hole 22 is formed in said mouthpiece 20.

[0024] the current drawn from said 2nd edge 15 -- it escapes from a conductor 17 outside through said reflective part 2, and it is connected to a contact member 9 there.

[0025] the part corresponding to said drawing 1 in the reference number in drawing 2 a -- receiving -- 40 -- it is large. A ring 58 is about 46 narrow part, and is in the perimeter of the 1st edge 54 of the electric bulb 50 in the inside of the necklike part 45 of a reflector 41. For example, the above-mentioned ring made from quartz glass touched said necklike part 45, and has surrounded said 1st edge over the whole in the about 0.1mm small gap. The mouthpiece 60 of drawing is made from a metal and is united with the contact 61. This contact 61 has the screw thread for making a cable tag fix with a nut. Said mouthpiece 60 is being fixed with the jointing material for corrugated fibreboard 59 as well as an electric bulb 50. The transparence plate 70 is being fixed to said reflector 41 using the collar-head ring 79.

[0026] Since said transparence plate 70 is fixed, drawing 2 b shows clamp ring 79' which can be inserted in the perimeter of said reflector 41.

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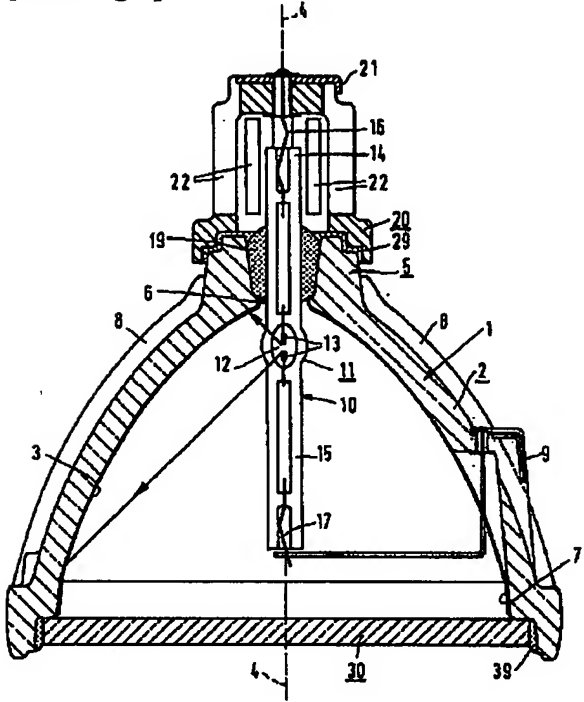
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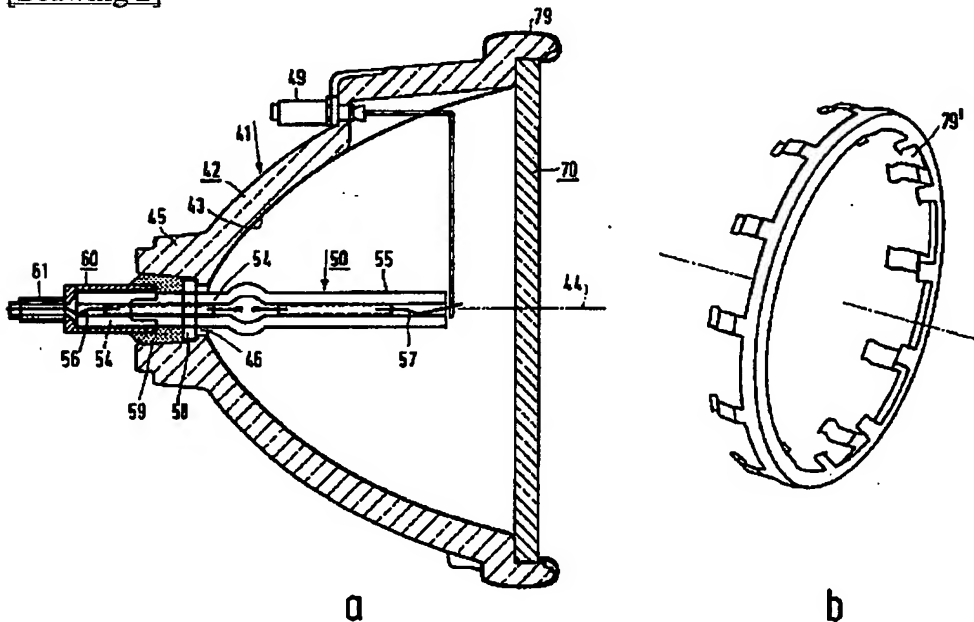
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## DRAWINGS

[Drawing 1]



[Drawing 2]



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**CORRECTION OR AMENDMENT**

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[Procedure revision]  
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 [Procedure amendment 1]  
 [Document to be Amended] Specification  
 [Item(s) to be Amended] Whole sentence  
 [Method of Amendment] Modification  
 [Proposed Amendment]  
 [Document Name] Specification  
 [Title of the Invention] The unit of an electric bulb and a reflector  
 [Claim(s)]

[Claim 1] The mold reflector equipped with the reflective section with a concave reflector with an optical axis, and the hollow necklike part which are this reflective section and one and surrounds the above-mentioned optical axis, It has the light transmission lamp container with dead air space by which the closure was carried out, and an electric element is arranged in this dead air space. This lamp container A conductor is the electric bulb derived from said lamp container through said closure section outside, and it sets in said reflector. each current which is equipped with the 1st and 2nd edges which counter mutual [ with the closure section ], and is connected to said electric element -- The electric bulb fixed as said 1st edge is inside said necklike part, and said dead air space is located in said reflective circles and said electric element is on said optical axis, said current -- the unit of the electric bulb which has the mouthpiece which has electric contact to which a conductor is connected and is fixed to said necklike part of said reflector, and a reflector -- it is It is the unit of the electric bulb which said necklike part has a narrow part inside, and said necklike part shifts to said



reflector in this narrow part, and is characterized by said necklike part spreading inner toward said mouthpiece from said narrow part, and a reflector.

[Claim 2] Said necklike part is the unit of the electric bulb according to claim 1 characterized by spreading inner toward said mouthpiece in the shape of a cone from said narrow part, and a reflector.

[Claim 3] The unit of the electric bulb according to claim 1 or 2 characterized by closing said reflector with a transperance plate, and a reflector.

[Claim 4] The unit of the electric bulb according to claim 3 characterized by for said reflective section adjoining said transperance plate, and having a \*\*\*\* cylinder-like edge, and a reflector.

[Claim 5] An electric bulb given in claim 1 characterized by said reflector having a concave convex outside thru/or any 1 term of 4, and the unit of a reflector.

[Claim 6] An electric bulb given in claim 1 characterized by preparing the air hole in said mouthpiece thru/or any 1 term of 5, and the unit of a reflector.

[Claim 7] said current derived from said 2nd edge -- an electric bulb given in claim 1 characterized by for a conductor falling out outside through said reflective section, and connecting it to a contact member in this exterior thru/or any 1 term of 6, and the unit of a reflector.

[Claim 8] An electric bulb given in claim 1 to which a ring is characterized by being around said 1st edge near [ said ] the narrow part in said necklike part thru/or any 1 term of 7, and the unit of a reflector.

[Claim 9] a ring -- the inside of said necklike part -- a narrow part near [ said ] -- the surroundings of said 1st edge -- it is -- said current -- an electric bulb given in claim 1 characterized by for a conductor falling out from said 2nd edge outside through said reflective section, and connecting it to a contact member in this exterior thru/or any 1 term of 6, and the unit of a reflector.

[Detailed Description of the Invention]

[0001]

[Industrial Application] The mold reflector equipped with the hollow necklike part which this inventions are the reflective section with a concave reflector with an optical axis, this reflective section, and one, and surrounds the above-mentioned optical axis, It has the light transmission lamp container with dead air space (cavity) by which the closure was carried out, and an electric element is arranged in this dead air space. This lamp container each current which is equipped with the 1st and 2nd edges which counter mutual [ with the closure section ], and is connected to said electric element -- a conductor is the electric bulb derived from said lamp container through each aforementioned closure section outside, and set in said reflector the electric bulb fixed as said 1st edge is inside said necklike part, and said dead air space is located in said reflective circles and said electric element is on said optical axis, and said current -- it has electric contact to which a conductor is connected, and is related with the unit of the electric bulb which has the mouthpiece fixed to said necklike part of said reflector, and a reflector.

[0002]

[Description of the Prior Art] The unit of the above electric bulbs and reflectors is known from U.S. Pat. No. 4,423,348.

[0003] A such type unit can be used also not only in the thing aiming at projection like a film or slide projection but in projection TV (projection TV) equipment. When the light generated by the lamp should be used efficiently, as for this lamp, an own electric element needs to be located on the optical axis of the reflective section. Since the variation rate of the longitudinal direction of a lamp is permitted, change of the location of the above-mentioned component in a lamp container makes a large necklike part need. However, a large necklike part decreases the magnitude of the reflector of the reflector of a given configuration and a dimension.

[0004] The loss of further others of the area of a reflector (reduction) arises at the point referred to as that a reflector must have the configuration by which clearing (clearing) should be carried out. It means saying that clearing can take out a reflector from the mold (mold) by which this reflector is fabricated. Within the open mold (open mould), only when it can displace, a reflector is possible for this, so that a gap may be brought about between mold and a reflector by the all side. A known reflector spreads toward the reflective section for this purpose. For the variation rate of the longitudinal direction of a lamp, in the free end of said necklike part, when a sufficient room is required, this necklike part will have excessive large space also in the part which adjoins the reflective section according to it.

[0005] the [ European Patent application ] -- according to the EP 92 201 469 No., the necklike part is divided into two longitudinal parts. These parts are combined at the time of the assembly of a reflector and a lamp. In this case, when the reflective section and the necklike part which is one become short, the breadth which goes to the reflective section also becomes small according to it. However, the number of assembly \*\*\*\*\* components has inconvenient [ with one / which increases for this division ].

[0006]

[Objects and Summary of the Invention] The place made into the purpose of this invention is to offer the unit of an electric bulb which is an easy configuration and has a comparatively big reflector and which is stated at the beginning, and a reflector.

[0007] According to this invention, said necklike part has a narrow part (narrowed portion) inside, said necklike part shifts to said reflector in this narrow part, and this purpose is realized when said necklike part spreads inner toward said mouthpiece from said narrow part.

[0008] It can originate in the configuration of the configuration of a reflector, division, and a necklike part, a reflector can be formed by the 1st mold, and the dead air space in a necklike part can be formed by this 1st mold and the 2nd mold which collaborates. Within the closed mold (closed mould), these two parts cross mutually in said narrow part. As a result, a narrow part can choose a size required in order to position an electric element on an optical axis with a lateral variation rate. As a result, opening within the reflector where a necklike part shifts to the reflective section is fully located in general in the solid angle surrounding the 1st edge of a lamp with which neither any light resulting from refraction by the ingredient of a lamp container nor what kind of useful light is emitted.

[0009] A necklike part makes it possible to fix a lamp container to a reflector in this necklike part inner circumference side using a coagulant, for example, cements like lamp cement. For this reason, it is convenient that a necklike part becomes the largest in the own free end. It is also desirable that a necklike part has a narrow part near the reflective section. This prevents the danger that non-solidified adhesives will flow into reflective circles. moreover, the unit concerned -- what kind of -- others -- components are advantageous at the point which can assemble an electric bulb without the need of consisting beforehand, with a reflector.

[0010] In one example, a ring is around said 1st edge near [ said ] the narrow part in said necklike part. This advantage is a point referred to as being able to use in the case of spreading, the adhesives (cement), for example, cement like lamp cement, which flows comparatively easily. That is, a ring is narrowed as [ take / to the matter which flows the path to the reflective section easily / this path ].

[0011] When a reflector is closed with a transarence plate, it is advantageous to the safety of the unit concerned. Thereby, an inflammable body can prevent contacting the hot part of the lamp concerned. Moreover, thereby, the danger of being contained in explosion of a lamp container can be decreased. A transarence plate is fixable to a reflector using adhesives, for example, silicon adhesives. In other examples, a transarence plate may be fixed by the mechanical means using the ring with which the flange surrounding a reflector was attached. Moreover, a clamp ring or some clamps may be used as the substitute.

[0012] In a suitable modification, the reflective section has a \*\*\*\* cylinder-like edge near the transarence plate. Supposing it wishes, in order to realize low temperature as the whole, it is possible without the increment in capacity which causes the increment in the diameter of the unit concerned to enlarge capacity inside the reflective section as a result. The increment in such a diameter does not have the cylindrical concave surface-like reflector which is curving parabolic or in the shape of an ellipse, and it will be produced when expanded to shaft orientations according to the same curve as the above.

[0013] In addition, it is [ in / other examples ] still more possible to give a concave convex like for example, a field with a rib (ribbed surface) to the exterior of a reflector. Thereby, it is increased and surface area makes bigger heat transfer possible. As a fact, not only a transarence plate but the adhesives for fixing the lamp concerned to a necklike part have restricted the aeration of the space in a reflector, or have barred it.

[0014] A mouthpiece may be equipped with opening for producing the flow of the air through the mouth piece, for example, a slot. In other examples, mouthpieces may be the ceramic or metal bodies which are fixed, for example so that said 1st edge may be surrounded, such as the shape of a cylindrical shape. For example, in a necklike part, a projection and a jointing material for corrugated fibreboard are used for a mouthpiece, and it may be fixed.

[0015] An electric element may be the electrode of the incandescent body in the inert gas which has a halogen, or the pair in ionicity gas. the case where to operate or light a discharge arc by the high voltage (reignition) is desired -- said current -- the case where a conductor falls out from said 2nd edge outside through said reflective section, and is connected to a contact member in this exterior is advantageous. In this case, distance can leave two contact members mutual comparatively greatly, therefore they can make very small danger of the flashover between these members (flash over).

[0016] In the unit which has the lamp which has packing containing the lamp which has packing containing rare gas and metal halide with 200 bars of discharge lamps, for example, a high-pressure discharge lamp, for example, \*\*\*\*, and the very high working pressure beyond it or rare gas, mercury, and a halogen, when it has a means, for example, the crevice suitable for this purpose, for a reflector to hold a low battery / high-voltage converter outside, it is advantageous. In this case, the conductor which transmits the high voltage can be shortened very much.

[0017]

[Example] In drawing 1, the unit of an electric bulb and a reflector has the mold reflector 1 of a concave with an optical axis 4 equipped with the reflective section 2 with the reflector 3 which curved in the shape of a paraboloid, and the hollow necklike part 5 which are this reflective section and one and surrounds the above-mentioned optical axis. However, in other examples, this reflector may curve for example, in the shape of ellipsoid. In this drawing, the reflector is made with glass and has a metal layer, for example like an aluminum layer which acts as a mirror. However, in other examples, a reflector may be made from a metal or synthetic resin. Moreover, the unit concerned has the electric bulb 10 equipped with the light transmission lamp container 11 made from quartz glass. The hermetic seal of this lamp container is carried out, and it has a cavity (dead air space) 12. In this cavity, the electric element 13 which is the electrode of a pair is arranged in drawing. Furthermore, the lamp container has the 1st edge 14 and 2nd edge 15 equipped with the closure section. these edges -- mutual -- countering -- on the other hand -- each current -- conductors 16 and 17 -- the inside of each closure section -- a passage -- an electric element 13 -- connecting -- having -- another side -- the exterior from the lamp container 11 -- escaping -- \*\*\*\*. The lamp currently illustrated is a high-pressure mercury discharge lamp which has 200 bar of \*\*\*\*, and a pressure beyond it at the time of actuation. The lamp container contains rare gas, for example, an argon, and a bromine in addition to mercury. As the 1st edge 14 is located inside a necklike part 5 by the electric bulb 10 which consumes the power of \*\*\*\* 70 thru/or 150W of \*\*\*\*, and a cavity 12 is located inside the reflective section 2 and an electric element 13 is located on an optical axis 4, in drawing, it is fixed in the reflector 1 with the jointing material for corrugated fibreboard (cement) 19. a current -- the mouthpiece 20 currently made from the ceramic ingredient in drawings, such as a steatite, for example, it has electric contact 21 to which a conductor 16 is connected is being fixed to the necklike part 5 of a reflector 1 with the jointing material for corrugated fibreboard (cement) 29 in drawing.

[0018] A necklike part 5 has the narrow part 6 which shifts to a reflector 3 in the inside section. As for this necklike part, the inside section has spread in the shape of a cone in the direction of a mouthpiece 20 from the above-mentioned narrow part.

[0019] The lamp currently illustrated emits light at the include angle of \*\*45 degrees to a perpendicular discharge on the street. By the narrow part 6, the light which all \*\*\*\* generated is curving in the shape of [ of a reflector 3 ] a paraboloid, and it is turned to the part by which the radius-of-circle part which shifts to said necklike part is not deformed. the 1st and the 2nd part of mold (mold) -- the time of mold shaping of a reflector -- the field of a narrow part -- setting -- 1 -- many -- \*\* -- \*\*

[0020] The reflector 1 currently illustrated is closed with the transparence plate 30. Although fixed using the jointing material for corrugated fibreboard (cement) 39 in drawing, in other examples, it may be equipped with this transparence plate by other means like a metal ring.

[0021] The reflective section 2 has the edge 7 of the shape of a \*\*\*\* cylinder which adjoins the transparence plate 30. So, it is increased by the capacity of the reflective section, without increasing the diameter of the unit concerned substantially.

[0022] A reflector 1 has a concave convex in an own outside. some waves (corrugations) -- 8 has extended in shaft orientations.

[0023] The air hole 22 is formed in the mouthpiece 20.

[0024] the current drawn from the 2nd edge 15 -- it escapes from a conductor 17 outside through the reflective section 2, and it is connected to a contact member 9 there.

[0025] the part corresponding to drawing 1 in the reference number in drawing 2 a -- receiving -- 40 -- it is large. A ring 58 is in the perimeter of the 1st edge 54 of the electric bulb 50 in the inside of the necklike part 45 of a reflector 41 by about 46 narrow part. For example, the above-mentioned ring made from quartz glass touched the necklike part 45, and has surrounded said 1st edge over the whole in the about 0.1mm small gap. In drawing, a mouthpiece 60 is made from a metal and is united with the contact 61. The contact 61 has the screw thread for making a cable tag fix with a nut. The mouthpiece 60 is being fixed with the jointing material for corrugated fibreboard (cement) 59 as well as an electric bulb 50. The transparence plate 70 is being fixed to the reflector 41 using the collar-head ring 79.

[0026] Since the transparence plate 70 is fixed, drawing 2 b shows clamp ring 79' which can be inserted in the perimeter of a reflector 41.

[Brief Description of the Drawings]

[Drawing 1] The sectional view of the shaft orientations of the 1st example of this invention is shown.

[Drawing 2] The 2nd example of this invention is shown, a shows the sectional view of the shaft orientations, and b shows the clamp for the advanced types of the unit of a.

[Description of Notations]

1 -- Reflector 2 42 -- Reflective section  
3 -- Reflector 4 -- Optical axis  
5 45 -- Necklike part 6 46 -- Narrow part  
7 -- Edge 8 -- Concave convex  
9 49 -- Contact member 10 -- Electric bulb  
11 -- Lamp container 12 -- Dead air space  
13 -- Electric element 14 54 -- The 1st edge  
15, and the 55 -- 2nd edge 16, 17, and 57 -- current -- conductor  
20 -- Mouthpiece 21 -- Electric contact  
22 -- Air hole 30 -- Transparence plate  
58 -- Ring

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[Translation done.]